AGENCY USE ONLY				
PERMIT NO.:	Date Rec'd.:	Amount Rec'd.:	Check No.:	Rec'd By:
MTG010240	10/29/13	$600	#9636	bs

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Montana Department of
ENVIRONMENTAL QUALITY
WATER PROTECTION BUREAU

FORM **NOI**

Notice of Intent (NOI) for Montana Pollution Discharge Elimination System Application for New and Existing Concentrated Animal Feeding Operations

The Application form is to be completed by the owner or operator of a Concentrated Animal Feeding Operation (CAFO) or Aquatic Animal Production Facility. Please read the attached instructions before completing this form. You must print or type legibly; forms that are not legible or are not complete will be returned. You must maintain a copy of the completed application form for your records.

Section A - Application Status *(Check one):*

- ☐ New — No prior application submitted for this site.
- ☐ Resubmitted — Permit Number: MTG _____
- ☑ Renewal — Permit Number: MTG 0 1 0 2 4 0 — 10/30/13
- ☐ Modification — Permit Number: MTG _____

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Section B - Facility or Site Information *(See instruction sheet.):*

Site Name: Riverview Colony

Site Location: (28N-5E-S13)

Nearest City or Town: Chester — County: Liberty

Latitude: 48.1771 — Longitude: -111.0292

Date Facility began operation? 1980

Is this facility or site located on Indian Lands? ☐ Yes ☑ No

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name: John J Wipf

Mailing Address: 1145 Dugout Road

City, State, and Zip Code: Chester, MT 59522

Phone Number: 1-406-456-3370

Is the person listed above the owner? ☐ Yes ☑ No

Status of Applicant *(Check one)* ☐ Federal ☐ State ☑ Private ☐ Public ☐ Other (specify) _____

Section D - Existing or Pending Permits, Certifications, or Approvals: ☐ None

☑ MPDES CAFO Discharge Permit ☐ RCRA _____

☐ PSD (Air Emissions) _____ ☐ Other _____

☐ 404 Permit (dredge & fill) _____ ☐ Other _____

Section E – Standard Industrial Classification (SIC) Codes:

Provide at least one SIC code which best reflects the construction activity of project described in Section H.			
Code	**A. Primary**	**Code**	**B. Second**
1	213	2	252
Code	**C. Third**	**Code**	**D. Fourth**
3	241	3	

Section F - Facility or Site Contact Person/Position:

Name and Title, or Position Title John J Wipf (Farm Boss)

Mailing Address Same as above

City, State, and Zip Code Same as above

Phone Number Same as above

Section G – Receiving Surface Waters(s):

Outfall/Discharge Locations: For each outfall, List latitude and longitude to the nearest second and the name of the receiving waters

Outfall Number	Latitude	Longitude	Receiving Surface Waters
001	48.2121	-110.9948	Dugout Coulee
002	48.1770	-111.0384	Tributary to Dugout Coulee
003			
004			
005			

Map: Attach a topographic map extending one mile beyond the property boundaries or the site activity identified in Section B depicting the facility or activity boundaries, major drainage patterns, and the receiving surface waters, stated above. Also identify the specific location of the production area, and land application area(s).

Is the receiving water on the 303(d) list for nutrients (nitrogen and/or phosphorus) ☐ Yes ☑ No

Section H – Concentration Animal Feeding Operation Characteristics

Waste Production, Storage and Disposal

Animal type	Number in Open Confinement	Number Housed Under Roof
☐ Mature Dairy Cows	50	260
☐ Dairy Heifers	50	
☐ Veal Calves		
☐ Cattle (not dairy or veal)		
☑ Swine (55 lbs or over)		2384
☑ Swine (55 lbs or under)		1300
☐ Horses		
☐ Sheep or Lambs		
☐ Turkeys		800
☐ Chickens (broilers)		2000
☐ Chickens (layers)		10,000
☐ Ducks		1000
☐ Other (Specify: Pullets)		5000
☐ Other (Specify:)		
☐ Other (Specify:)		

Manure, Litter and/or Wastewater Production and Use.

How much manure, litter, and process wastewater is generated annually by the facility?

Solid (tons): 2800 Liquid/Slurry (gallons): 8,000,000

If land applied, how many acres of land under control of the permit applicant are available to apply the manure, litter, or process wastewater generated from the facility? (Note: Do not include setback distances in available acreage

4653 Acres

How much manure, litter, and process wastewater is transferred to other persons per year? (estimated) Solid (tons): none Liquid/Slurry (gallons): none

Were the containment structures built after February 2006?

- ☑ Do the waste containment structures have 10 feet of separation between the pond bottom and any bedrock formations?
- ☑ Do the waste containment structures have 4 feet of separation from the pond bottom and any ground water?
- ☐ Were any of the waste containment structures built within 500 feet of any existing well?

	Type of Containment/Storage	Total Capacity	Units (gallons or tons)	Days of Storage
☐	Anaerobic Lagoon			
☑	Storage Pond #1	2,050,000	gallons	94
☐	Storage Pond #2	5,600,000	gallons	256
☐	Storage Pond #3			
☐	Storage Pond #4			
☐	Storage Pond #5			
☐	Above Ground Storage Tank			
☐	Below Ground Storage Tank #1	128,000	gallons	6
☐	Below Ground Storage Tank #2			
☐	Underfloor Pits			
☐	Roofed Storage Shed			
☐	Concrete Pad	2200	tons	275
☐	Impervious Soil Pad			
☐	Other (Specify: Dry Lot)	2100	tons	263
☐	Other (Specify:)			

Physical Data for CAFO

Nutrient Management Plan

All Concentrated Animal Feeding Operations seeking permit coverage after July 31, 2007 are required to complete and implement a Nutrient Management (NMP). The NMP must be submitted to the Department using the form provided by the Department (Form NMP). Check the box below that applies and provide the required information. The NMP must be developed in accordance with ARM 17.30.1334 and implemented upon the effective date of permit coverage. (Check One)

☑ Does the facility have an NMP?

Date NMP was developed: 2009

Date NMP was last modified: 1-5-2011

☐ NMP has not been prepared; provide detailed explanation below

Section I – Supplemental Information

Section J - CERTIFICATION

Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)		
John J Wipf		
B. Title (Type or Print)	**C. Phone No.**	
Sec / Treas	406 456-3738	
D. Signature	**E. Date Signed**	
John J Wipf	10-27-13	

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form (NOI) and the applicable fee to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

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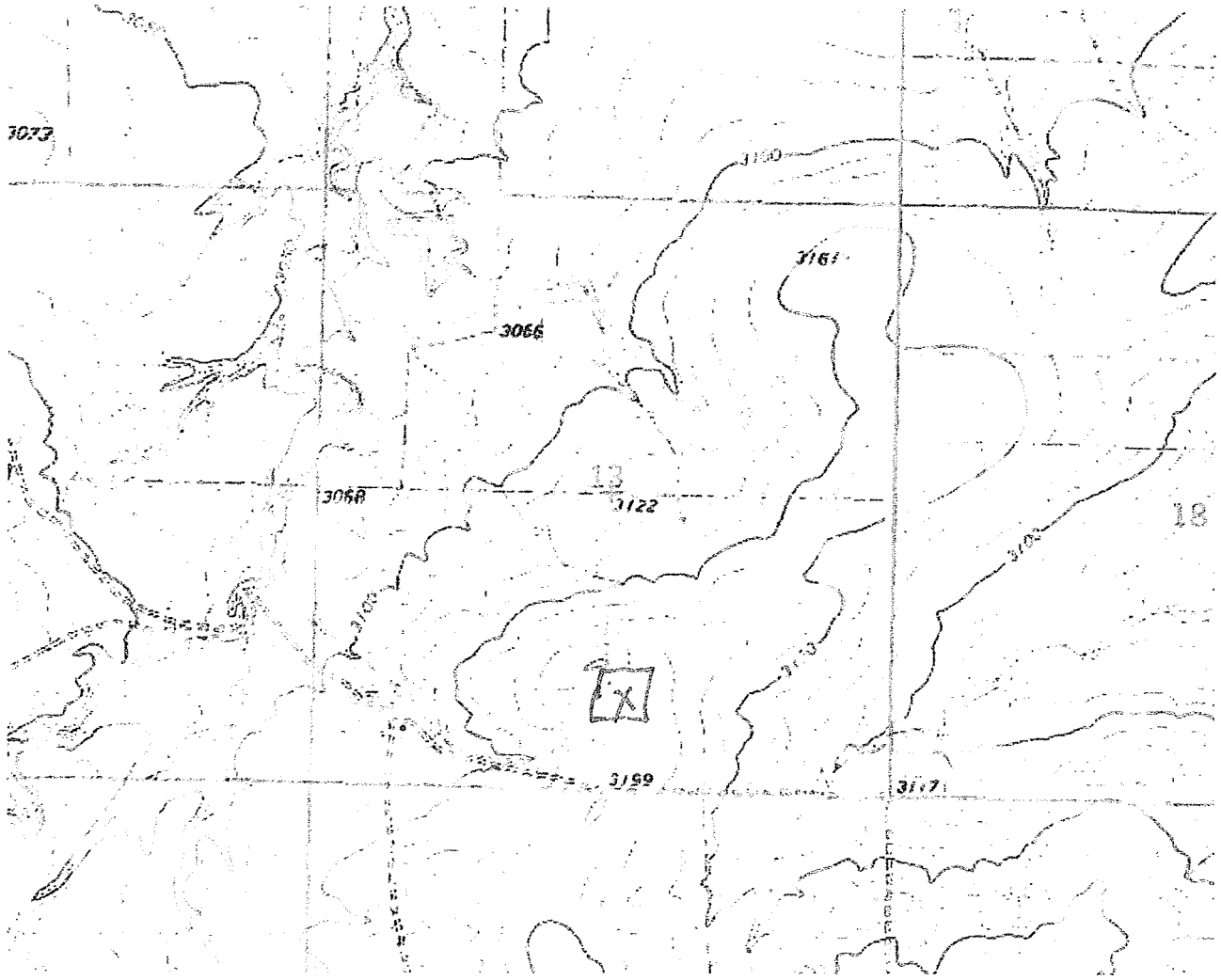
Riverview Colony



See NMP maps for field applications

AGENCY USE ONLY				
PERMIT NO.: MTG-010240	Date Rec'd.: 10/29/13	Amount Rec'd.: $600	Check No.: ✓ #9636	Rec'd By: LS

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Montana Department of
ENVIRONMENTAL QUALITY
WATER PROTECTION BUREAU

FORM **NMP**

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For filling out Form NMP," found at the back of this form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your NOI-CAFO. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. The 2013 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp

Section A – NMP Status:

- ☐ New — No prior NMP submitted for this site.
- ☐ Resubmitted — Previous NMP found incomplete.
- ☑ Modification — Change or update to existing NMP.
- ☐ New 2013 — New 2013 version of NMP.

Section B – Facility Information:

Facility Name: Riverview Colony

Facility Location: (28N-5E-S13)

Nearest City of Town: Chester County: Liberty

Section C – Applicant (Owner/Operator Information):

Owner or Operator Name: John J Wipf

Mailing Address: 145 Dugout Road

City, State, and Zip code: Chester, MT 59522

Facility Phone Number: 1-406-456-3370

Email:

3. Waste Control Structures

Waste Control Structures (name/type)	Length (ft.)	Width (ft.)	Depth (ft.)	Volume (cubic ft. or gallons)	Number of days of storage
1. Pond 1	344 ft	104 ft	11 ft	2,050,000 g	94
2. Pond 2	396 ft	216 ft	11 ft	5,600,000 g	256
3. Separator tank	65 ft	24 ft	112 ft	128,000 g	6
4. Concrete pad	120 ft	100 ft	8 ft	2200 tons	275
5. Dry Lots	400	200	1	2100 tons	263
6.					
7.					
8.					
9.					
10.					
11.					
12.					

What is the 24 hr. 25 yr. storm event at this facility 2.8 inches WRCC

Production area: 20 **acres.** **Type of lot (dirt or paved):** dirt/gravel

Area contributing drainage form outside CAFO that enters confinement areas and waste storage, conveyance, or treatment structures: Less than 5 **acres.**

What is the annual precipitation during the critical storage period 3.66 inches WRCC

How much freeboard do the pond(s) have More than 24 inches

4. Disposal of Dead Animals.

Describe how dead animals are disposed of at this facility:

Animals are buried in a disposal pit and covered with earth within 48 hours.

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

All Swine and Poultry production is enclosed. Building run-off is directed away from waste storage facilities. A clean water diversion separates holding ponds from run-off. Facility was reviewed by NRCS and appropriate runoff structures were installed via EQIP contract for a CNMP.

6. Prohibiting Animals and Wastes from Contact with State Waters
Describe how animals and wastes are prohibited from direct contact with state waters:

No confined animals are in contact with State waters. See above

Describe how Chemicals and other contaminants are handled on-site:

All chemicals are stored within covered concrete storage outside of the manure production area.

7. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural BMPS which will be used to control runoff of pollutants from facility's production area. Indicate the location of these measures. If BMPS are not installed include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces,, and waterways above and open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area: decreasing open lot surface area; repairing of adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.
Production Area BMP's

All clean water is diverted away from waste storage areas by drainage. All swine, Poultry production is indoors. See previously provided information. Manure is removed and applied to fields in a timely manner. A Comprehensive Nutrient management plan was developed for this site by NRCS.

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's land production area. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites;

never spray irrigating waste on to frozen ground: consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Land Application BMP's

Liquid manure is applied by as as part of a Comprehensive Nutrient Management Plan. A minimum of 20 feet is maintained for manure application set backs. Grass filters are present along drainage ways and field borders. See previously submitted maps for locations. Solid manure is applied in the fall before freeze up at agronomic rates.

Buffers	☑ Yes ☐ No	**Conservation Tillage**	☑ Yes ☐ No
Constructed Wetlands	☐ Yes ☐ No	**Grass Filter**	☑ Yes ☐ No
Infiltration Field	☐ Yes ☐ No	**Residue Management**	☑ Yes ☐ No
Set backs	☑ Yes ☐ No	**Terrace**	☐ Yes ☐ No

Other examples

8. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part 2 of the permit.

Has a guidance document been developed for the facility? ☑ Yes ☐ No

Certify the document address the following requirements:

Implementation of the NMP:	☑ Yes ☐ No
Facility operation and maintenance:	☑ Yes ☐ No
Record keeping and reporting	☑ Yes ☐ No
Sample collection and analysis:	☑ Yes ☐ No
Manure transfer	☐ Yes ☑ No

Provide name, date and location of most recent documentation:
NMP Modified 1-5-2011 (Colony)
MSU Extension service CAFO record keeping Sheets last updated December 2012. (Colony)
Agvise Laboratories September 2013 Soils. (Colony)
Agvise Laboritories September 2013 Manure. (Colony)

If your answer to any of the above question is no, provide explanation:
All manure is field applied within the current Nutrient Management plan.

Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

☑ Yes If yes, then the information requested in Section E must be provided.

☐ No If no, then provide an explanation of how animal waste at this facility are managed.

Manure application maps were provided in the original NMP with the documentation required below.

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"X 17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any downgradient surface waters.
- The location of any downgradient open tile line intake structures
- The location of any downgradient sinkholes
- The location of any downgradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibration procedures:

Manure is applied an injection system mounted to a tool bar pulled by a tractor. Flow Meter installed.

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to ARM 17.30.1334

Other (describe)

Manure sampled annually as listed above.

Soil Sampling and Analysis Procedures

Representative soil (composite) samples from the top 6 inches layer of soil for each field where manure will be applied must be analyzed for phosphorus content at least once every three years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater

Soil samples collection will occur according the methods in ARM 17.30.1334

Other (describe)

All fields receiving manure are annually sampled prior to nutrient budget development.

Phosphorus Risk Assessment

The permittee shall access the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or

may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

Method A – Representative Soil Sample
Method B – Phosphorus Index

Method A – Representative Soil Sample

a. Obtain one or more representative soil sample(s) from the field per 17.30.1334
b. Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm)
c. Using the results of the Olsen P test, determine application basis according to the Table below.

Soil Test

Olsen P Soil Test Results (ppm)	Application Basis
<25.0	Nitrogen Needs of Crop
25.1 - 100.0	Phosphorus Needs of Crop
100.0 – 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application allowed

Method B – Phosphorus Index

a. Complete a phosphorus Index according to the crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections in Appendix A, please refer to the method as described in Natural Resource Conservation Service (NRCS), Agronomy Technical Note MT-77 (rev3), January 2006.
b. Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus

Total Phosphorus Index Value	Site Vulnerability to Phosphorus Loss
<11	Low
11-21	Medium
22-43	High
>43	Very High

c. Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	Application Basis
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

permit, (2) credits for all nitrogen in the field that will be plant- available, (3) the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied, (4) consideration of multi-year phosphorus application (for any field where nutrients are applied at a rate based on the crop phosphorus requirement, the methodology must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement), (5) all other additions of plant available nitrogen and phosphorus to the field (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen), (6) timing and method of land application, and (7) volatilization of nitrogen and mineralization of organic nitrogen.
- Any other factors necessary to determine the amounts of nitrogen and phosphorus to be applied in accordance with the Narrative Rate Approach.
- NMPs using the Narrative Rate Approach must also include the following projections, which will not be used by the permitting authority in establishing site-specific permit terms:

i. Planned crop rotations for each field for the period of permit coverage.
ii. Projected amount of manure, litter, or process wastewater to be applied.
iii. Projected credits for all nitrogen in the field that will be plant-available.
iv. Consideration of multi-year phosphorus application.
v. Accounting for other additions of plant-available nitrogen and phosphorus to the field.
vi. The predicted form, source, and method of application of manure, litter, and process wastewater for each crop

- If the receiving water is on the 303(d) list for nutrients then the narrative rate approach must be used.

a. For the Linear Approach the permittee will complete the Nutrient Budget Worksheet, below, for the next 5 years to which manure or process waste water is or may be applied. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet

Field identification: Example Year: Example Crop: Winter Wheat					
Expected Crop Yield: 50 Bushels/acre					
Phosphorus index results or Phosphorus application from soil test: 26 PPM P Soil test					
Method of Application: Tool bar sweep Injection (90 % efficiency)					
When will application occur: October					
Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	130 lbs	31 lbs	EB 161, Table 21
2	(-)	Credits from previous legume crops, lbs/ac	22 lbs	NA	Soil Test N
3	(-)	Residuals from past manure production lbs/acre	NA	NA	
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	20 lbs	O	Starter Fert.
5	(-)	Nutrients supplied in irrigation water, lbs/acre	NA	NA	
6		**= Additional Nutrients Needed, lbs/acre**	88 lbs	31 lbs	EB 161 Table 21
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	21 lbs/1000	1.3 lbs/1000	Agvise Lab
8	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0	.90	1	NRCS
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**	19 lbs/1000	1.3 lbs/1000	
10		Additional Nutrients needed, lbs/acre (calculated above)	88 lbs	31 lbs	
11	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	19 lbs/1000	1.3 lbs/1000	
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**	4631 gal/ac	23,846 gal/ac	(Nitrogen Based)

Comments:
The Crop Rotation for this operation was provided in the original Nutrient Management Plan.
This example shows the Nitrogen application as more limiting even at 26 PPM Phosphorus in the soil.
The 2013 and all subsequent year nutrient budgets will be submitted with the annual AR2 form.

Section F - CERTIFICATION

Permittee Information: This form must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)	
John J Wipf	
B. Title (Type or Print)	**C. Phone No.**
Self Ineas	10-27-13
D. Signature	**E. Date Signed**
John J Wipf	10-27-13

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form and the applicable fee to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

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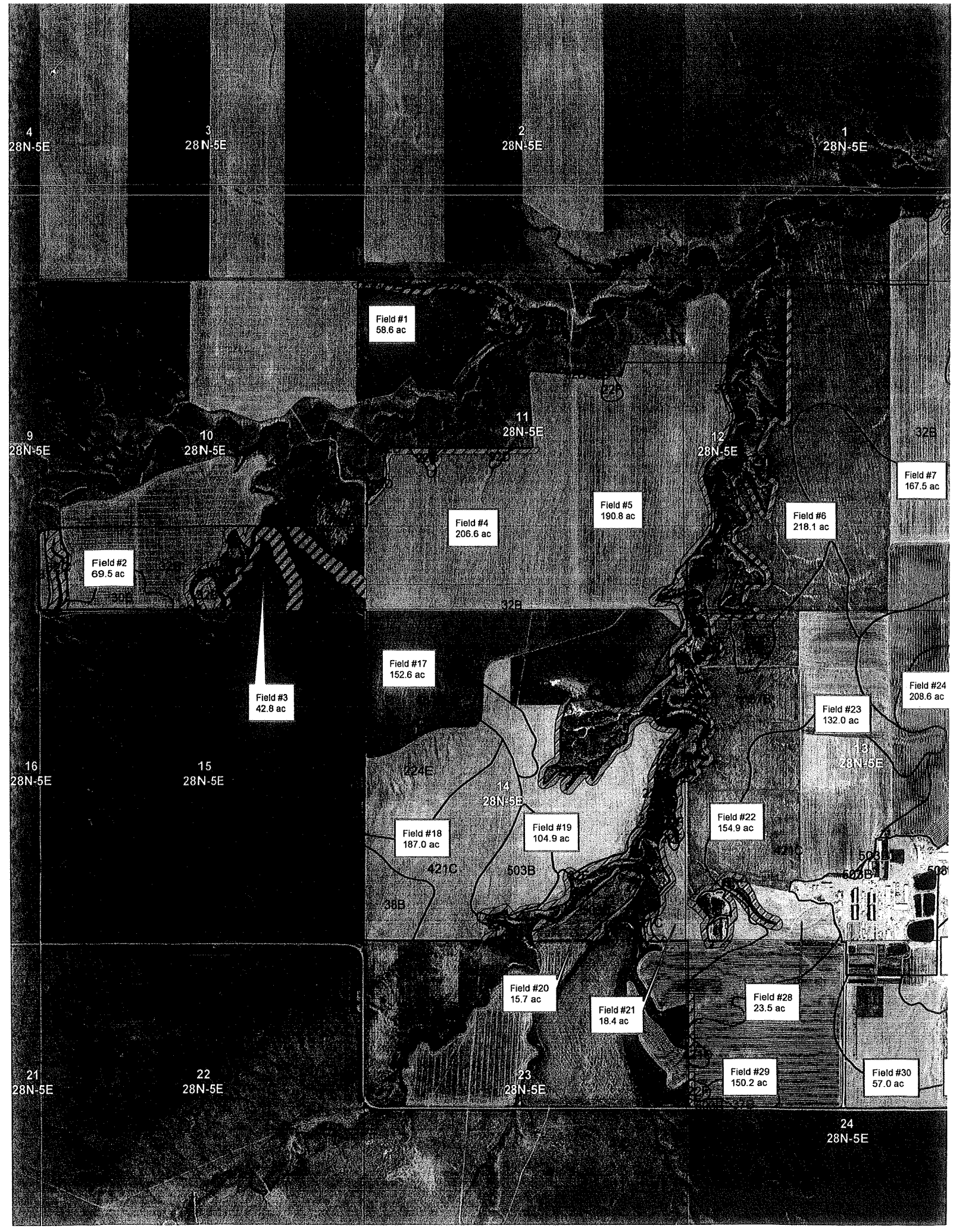
4
28N-5E
3
28N-5E
2
28N-5E
1
28N-5E
Field #1
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28N-5E
10
28N-5E
11
28N-5E
12
28N-5E
32B
Field #7
167.5 ac
Field #5
190.8 ac
Field #4
206.6 ac
Field #6
218.1 ac
Field #2
69.5 ac
30E
32B
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Field #3
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Field #24
208.6 ac
Field #23
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28N-5E
15
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424E
14
28N-5E
13
28N-5E
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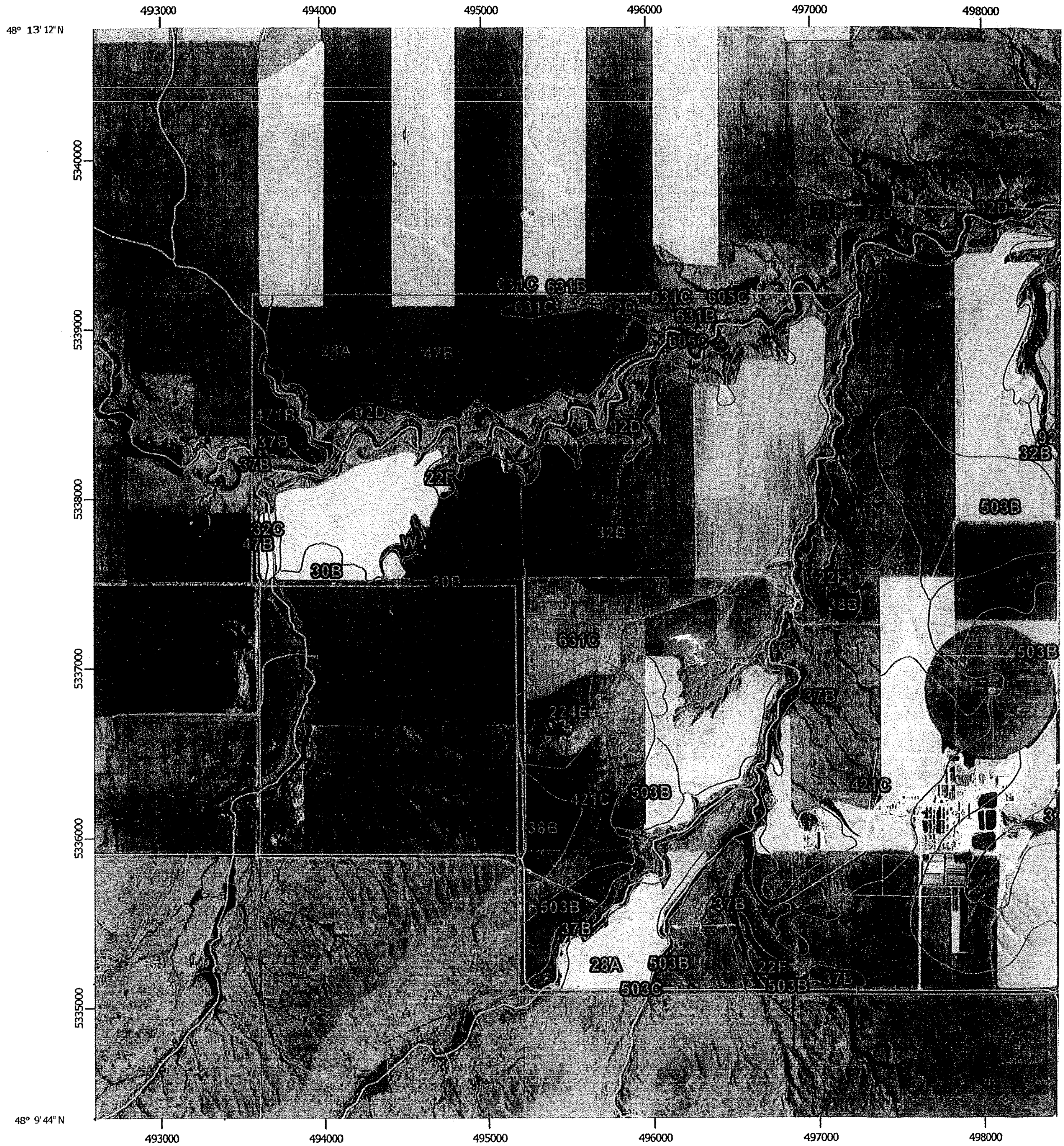
Field #19
104.9 ac
Field #22
154.9 ac
421C
503B
38B
Field #20
15.7 ac
Field #21
18.4 ac
Field #28
23.5 ac
21
28N-5E
22
28N-5E
23
28N-5E
Field #29
150.2 ac
Field #30
57.0 ac
24
28N-5E

111° 5' 58" W



111° 5' 58" W

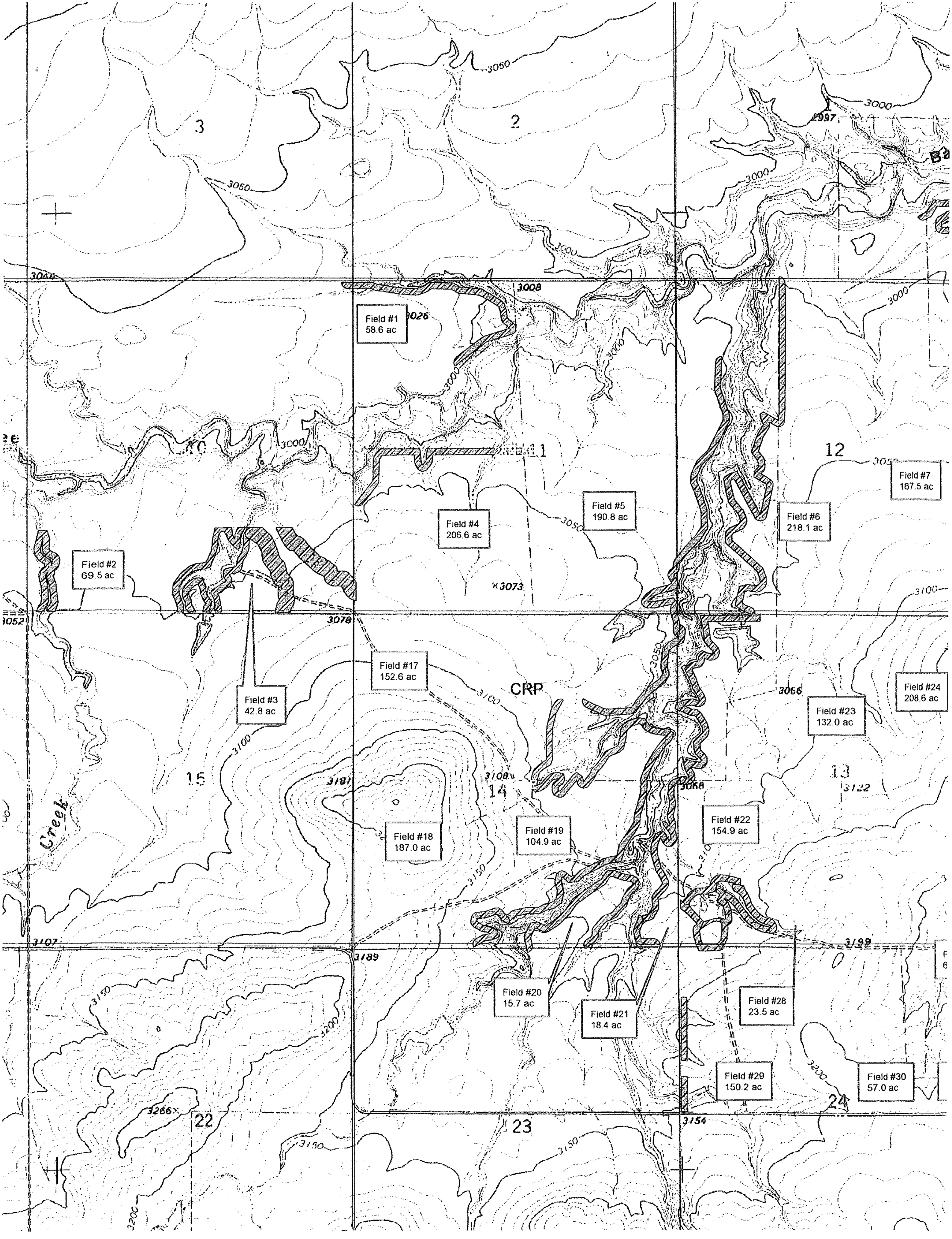
Map Scale: 1:31,300 if printed on B landscape (17" x 11") sheet.

Meters: 0 450 900 1800 2700

Feet: 0 1500 3000 6000 9000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84



3
2
3050
3000
2997
3008
Field #1
58.6 ac
3026
11
12
Field #7
167.5 ac
Field #5
190.8 ac
Field #4
206.6 ac
Field #6
218.1 ac
Field #2
69.5 ac
×3073
3100
3052
3078
Field #17
152.6 ac
CRP
3066
Field #24
208.6 ac
Field #3
42.8 ac
Field #23
132.0 ac
15
3181
3108
14
3068
13
3122
Creek
Field #22
154.9 ac
Field #18
187.0 ac
Field #19
104.9 ac
3150
3107
3189
3199
Field #20
15.7 ac
Field #21
18.4 ac
Field #28
23.5 ac
3200
Field #29
150.2 ac
Field #30
57.0 ac
3266×
22
23
24
3154

Map Unit Legend

Liberty County, Montana (MT051)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
21E	Cabbart-Delpoint loams, 8 to 25 percent slopes	25.5	0.3%
22F	Hillon loam, 25 to 60 percent slopes	270.7	3.7%
28A	Nishon clay loam, 0 to 1 percent slopes	5.0	0.1%
30B	Marvan silty clay, 0 to 4 percent slopes	26.0	0.4%
32B	Kobase silty clay loam, 0 to 4 percent slopes	1,780.9	24.4%
32C	Kobase silty clay loam, 4 to 8 percent slopes	41.5	0.6%
37B	Evanston loam, 0 to 4 percent slopes	429.2	5.9%
38B	Ethridge silty clay loam, 0 to 4 percent slopes	52.7	0.7%
47B	Marias silty clay, 0 to 4 percent slopes	345.6	4.7%
63B	Nunemaker silty clay loam, 0 to 4 percent slopes	36.1	0.5%
92D	Sunburst clay loam, 8 to 15 percent slopes	203.7	2.8%
92F	Sunburst clay loam, 15 to 45 percent slopes	172.2	2.4%
171C	Delpoint-Cabbart loams, 2 to 8 percent slopes	42.3	0.6%
224E	Hillon-Joplin loams, 8 to 25 percent slopes	75.6	1.0%
321B	Kobase silty clay loam, calcareous, 0 to 4 percent	823.3	11.3%
331B	Phillips-Elloam complex, 0 to 4 percent slopes	20.2	0.3%
421C	Joplin-Hillon loams, 2 to 8 percent slopes	1,198.3	16.4%
471B	Marias-Kobase complex, 0 to 4 percent slopes	37.0	0.5%
503B	Telstad-Joplin loams, 0 to 4 percent slopes	1,161.0	15.9%
503C	Telstad-Joplin loams, 4 to 8 percent slopes	1.3	0.0%
561B	Scobey-Kevin clay loams, 0 to 4 percent slopes	100.9	1.4%
605C	Yamacall-Havre loams, 0 to 8 percent slopes	347.3	4.8%

Liberty County, Montana (MT051)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
631B	Nunemaker silty clay loam, calcareous, 0 to 4 percent slopes	22.0	0.3%
631C	Nunemaker silty clay loam, calcareous, 4 to 8 percent slopes	73.7	1.0%
W	Water	12.4	0.2%
Totals for Area of Interest		**7,304.0**	**100.0%**